



NOAA In Your State



Massachusetts



NOAA is an agency that enriches life through science. Our reach goes from the surface of the sun to the depths of the ocean floor as we work to keep citizens informed of the changing environment around them. From daily weather forecasts, severe storm warnings, and climate monitoring to fisheries management, coastal restoration and supporting marine commerce, NOAA's products and services support economic vitality and affect more than one-third of America's gross domestic product. NOAA's dedicated scientists use cutting-edge research and high-tech instrumentation to provide citizens, planners, emergency managers and other decision makers with reliable information they need when they need it.

The following is a summary of NOAA facilities, staff, programs, or activities based in, or focused on, your state or territory: Starting with highlights, then by [congressional districts and cities or towns](#), [coastal programs](#), and then [statewide programs](#).

Highlights of NOAA in Massachusetts

Office for Coastal Management	Gloucester	MA-6
Waquoit Bay National Estuarine Research Reserve	Waquoit	MA-9
Woods Hole Laboratory	Woods Hole	MA-9
New England Bay-Watershed Education and Training Program	Statewide	MA
Northeast Fisheries Science Center	Statewide	MA

The state of Massachusetts also has one Cooperative Institute, one Weather Forecasting Offices, four Labs and Field Offices, one Science on a Sphere® exhibitions, and one National Estuarine Research Reserves.

Weather Forecast Offices

Boston MA

National Weather Service (NWS) Weather Forecast Offices (WFO) are staffed 24/7/365 and provide weather, water, and climate forecasts and warnings to residents of Massachusetts. There are 122 [WFOs nationwide](#) of which one is in Massachusetts. Highly trained forecasters issue warnings and forecasts for weather events, including severe thunderstorms, tornadoes, hurricanes, winter storms, floods, and heat waves to the general public, media, emergency management and law enforcement officials, the aviation and marine communities, agricultural interests, businesses, and others. Information is disseminated in many ways, including wireless emergency alerts, social media, [weather.gov](#), and NOAA Weather Radio All Hazards. Each WFO has a Warning Coordination Meteorologist who actively conducts outreach and educational programs that strengthen working relationships with local partners in emergency management, government, the media and academic communities. Forecasters provide Impact-based Decision Support Services (IDSS), both remotely and on-site during critical emergencies such as wildfires, floods, chemical spills, and major recovery efforts. To gather data for forecasting and other purposes, NWS WFO staff monitor, maintain and use Automated Surface Observing Stations and Doppler Weather Radar. In addition to the WFOs, NWS operates specialized national prediction [centers](#) and regional headquarters throughout the U.S. for a total of 168 operational units. Over 85% of NWS' workforce is in the field. For current Massachusetts weather, visit [www.weather.gov](#) and, on the national map, click on the relevant county or district.

Science On a Sphere®

New Bedford MA-9

Science On a Sphere (SOS) is a room-sized global display system that uses computers and video projectors to display planetary data onto a six-foot diameter sphere, analogous to a giant animated globe. Researchers at NOAA developed Science On a Sphere® as an educational tool to help illustrate Earth System science to people of all ages. Animated images of atmospheric storms, climate change, and ocean temperature can be shown on the sphere, which is used to explain in a way that is simultaneously intuitive and captivating what are sometimes complex environmental processes. It is located at the Ocean Explorium in New Bedford

MA- 2

Petersham [Harvard Forest]

Office of Oceanic and Atmospheric Research (OAR) - [Halocarbon Measurements](#)

NOAA's Earth System Research Laboratory Global Monitoring Laboratory (ESRL/GML) operates a sampling network to measure the distribution and trends of the gases most responsible for human-caused depletion of the stratospheric ozone layer. Weekly samples are collected in high pressure flasks at fixed locations. The air sample flasks are delivered to ESRL/GML, located in Boulder, CO for analysis. Some locations conduct continuous surface measurements on site. Halocarbon measurements help determine the effectiveness of efforts to protect and restore the ozone layer - so it can protect us from the sun's ultraviolet radiation.

MA- 3

Worcester

Office of Oceanic and Atmospheric Research (OAR) - [Carbon Cycle Gases and Halocarbons](#)

NOAA's Earth System Research Laboratory Global Monitoring Laboratory (ESRL/GML) operates a small aircraft-based North American network of sampling sites to measure vertical profiles of important greenhouse gas concentrations. Air is sampled above the surface up to approximately 25,000 feet above sea level using a relatively small, light, and economical automated system developed by ESRL researchers. These air samples are delivered to ESRL/GML in Boulder, Colorado for measurements of CO₂, CH₄, and other greenhouse gasses. This data will improve understanding and models of the global carbon cycle. Sampling is conducted bi-weekly. Some air samples from the small aircraft program are also analyzed for halocarbon gases that can destroy the stratospheric ozone layer. Halocarbon measurements help determine the effectiveness of efforts to protect and restore the ozone layer so it can protect us from the sun's ultraviolet radiation.

MA- 4

Taunton

National Environmental Satellite, Data, and Information Service (NESDIS) - [National Centers for Environmental Information](#) - [Eastern Regional Climate Services Director](#)

NOAA's six Regional Climate Services Directors (RCSDs), which are part of NCEI, support the development and delivery of a wide range of place-based climate science and information products and services to help people make informed decisions. RCSDs regularly communicate with stakeholders about climate information needs, and help build and strengthen active partner networks with public and private constituents. They play a primary role in integrating the work within NOAA and among its partners engaged in developing and delivering climate services at the regional level. These efforts serve to increase the value of climate information to users and support more efficient, cost-effective delivery of products and services.

National Weather Service (NWS) - [River Forecast Center](#)

Co-located with the NWS Weather Forecast Office about 30 miles south of Boston in Taunton, the NWS Northeast River Forecast Center (RFC) performs continuous river basin modeling and provides hydrologic forecast and guidance products for rivers and streams in New England and New York. These products include forecasts of river stage and flow, probabilistic river forecasts, reservoir inflow forecasts, gridded precipitation estimates and forecasts, spring flood outlooks, and flash flood and headwater guidance. Some of the RFCs in the western and central U.S. also provide water supply forecasts. RFCs work closely with local, state and federal water management agencies, including the U.S. Army Corps of Engineers, U.S. Bureau of Reclamation, and U.S. Geological Survey, to provide water and flood information for critical decisions (aka Impact-based Decision-Support Services or IDSS).

National Weather Service (NWS) - [Weather Forecast Office](#)

Co-located with the NWS Northeast River Forecast Center, about 30 miles south of Boston in Taunton, this NWS Weather Forecast Office (WFO) is staffed around-the-clock every day, and provides the best possible weather, water, and climate forecasts and warnings to residents of Massachusetts and Rhode Island. Highly trained forecasters issue warnings and forecasts for events, including severe thunderstorms, tornadoes, winter storms, floods, and heat waves. This essential information is provided to the general public, media, emergency management and law enforcement officials, the aviation and marine communities, agricultural interests, businesses, and others. Information is disseminated in many ways, including through dedicated government channels, satellite, the Internet, and NOAA Weather Radio All Hazards.

Forecasters also provide Impact-based Decision-Support Services (IDSS), both remotely and on-site, during critical emergencies, such as wildfires, floods, chemical spills, and for major recovery efforts such as those following the Joplin

and Moore tornadoes, Hurricanes Katrina and Sandy, and the Sept. 11, 2001, terrorist attacks in New York City and Washington D.C. The WFO collects and disseminates precipitation, river, and rainfall data, and prepares local climatological data. Each WFO has a Warning Coordination Meteorologist who actively conducts outreach and educational programs, which helps build strong working relationships with local partners in emergency management, government, the media and academic communities. The WFO operates Automated Surface Observing Stations (ASOS), as well as the local Doppler Weather Radar, which provides critical information about current weather conditions. The radar data enables forecasters to issue warnings for tornadoes, severe thunderstorms, and flash floods.

MA- 6

Gloucester

National Marine Fisheries Service (NMFS) - [Port Agent Field Office](#)

The Greater Atlantic Region's Port Agent Team works directly with the fishing industries of the region to provide in-person advice and support to fishermen and seafood dealers. Port agents also serve as a conduit for industry to relay information to the Regional Administrator and other NOAA staff about fishing industry concerns, thoughts and activities. Team members assist seafood dealers and vessel operators and owners with data reporting requirements, in navigating the permitting process, and with other Agency regulations and processes. They collect biological samples of seafood landed by commercial fishermen for use in fisheries stock assessments. They also provide the general public with information on fisheries and the marine environment by attending public events and through ad-hoc interactions.

National Marine Fisheries Service (NMFS) - [Market News Office](#)

NOAA's "Fishery Market News" began operations in New York City on February 14, 1938. This office provides accurate and unbiased reports depicting current conditions affecting the trade in fish and fishery products, including daily auction pricing in New England ports.

National Marine Fisheries Service (NMFS) - Northeast [Inspection Office and Laboratory and National Training Section](#)

NOAA's Seafood Inspection Program conducts a voluntary inspection program for fishery products on a fee-for-service basis. The Program offers a wide range of services to the area's fishermen, fish processors and fish brokers including process and product inspection, product grading, lot inspection, laboratory analysis, and training. All edible foodstuffs, ranging from whole fish to formulated products, as well as fishmeal used for animal foods, are eligible for inspection and certification.

National Marine Fisheries Service (NMFS) - [Atlantic Highly Migratory Species Management Division](#)

The Atlantic Highly Migratory Species Management Division manages Atlantic tuna, sharks, swordfish, and billfish under the Magnuson-Stevens Fishery Conservation and Management Act. In cooperation with an external advisory panel, the division develops and implements Fishery Management Plans for these species taking into account all domestic and international requirements under the Atlantic Tunas Convention Act, Marine Mammal Protection Act, the Endangered Species Act, and the Migratory Bird Treaty Act. The Gloucester office focuses primarily on Atlantic tuna fisheries, Atlantic bluefin tuna management and reporting, international trade, and recreational and commercial longline fishing.

National Ocean Service (NOS) - [Marine Debris Regional Coordinator](#)

The NOAA Marine Debris Program (MDP) supports national and international efforts to research, prevent, and reduce the impacts of marine debris. The MDP New England Regional Coordinator, based in Gloucester, supports coordination efforts with regional stakeholders, provides support to grant-funded projects, tracks progress of projects, and conducts regional marine debris outreach to local audiences.

MA- 8
Boston

NOAA Office of Education - [Environmental Literacy Program](#)

NOAA's Environmental Literacy Program (ELP), administered by the Office of Education, provides grants and in-kind support to advance NOAA's mission through formal (K-12) and informal education. In Massachusetts, ELP funded Museum of Science Boston (Suffolk) to build the environmental literacy of children, youth, and adults so they are knowledgeable of the ways in which their community can become more resilient to extreme weather, climate change, and other environmental hazards, and become involved in achieving that resilience. The funded project, conducted in partnership with Arizona State University, Northeastern University, and SciStarter, engages and involves diverse groups of participants at 28 U.S. science centers in active learning and resilience planning about environmental hazards. Participants are collecting, analyzing, and sharing data relevant with local resilience planners, learning about risks and vulnerabilities through visualizations of geospatial data, and participating in deliberative problem-solving to share and learn from perspectives about resilience strategies and their societal and environmental trade-offs. Ultimately, participants will formulate their own community resilience plans and present their findings and recommendations to local resilience planners and the public. ELP supports the New England Aquarium (Suffolk) as a member of the Coastal Ecosystem Learning Center (CELC) Network, which is a consortium of 25 aquariums and marine science education centers working together to engage the public in protecting coastal and marine ecosystems.

MA- 9
Boston

National Ocean Service (NOS) - [Scientific Support Coordinator and Regional Resource Coordinator](#)

NOAA's Office of Response and Restoration (OR&R) brings decades of experience, technical expertise and scientific analysis in response to oil and hazardous chemical spills. In addition to events that draw the national eye like Hurricane Sandy, OR&R also supports response to local emergencies including ship collisions and groundings in Buzzards Bay and Woods Hole in 2013. Eleven regionally based Scientific Support Coordinators (SSCs) harness the input of a multi-disciplinary team to address issues such as oil slick trajectory forecasting, environmental tradeoffs, best practices, resources at risk, oil science and properties, and chemical hazard assessment to reduce risks to coastal habitats and resources. The SSC works directly with the U.S. Coast Guard and the U.S. Environmental Protection Agency to provide critical scientific support to the Federal On-Scene Coordinator. OR&R also helps develop preparedness plans that identify spill response actions with the greatest environmental benefit and trains hundreds of members of the response community each year on the scientific and technical aspects of spills.

OR&R's Regional Resource Coordinators (RRCs) provide scientific and technical expertise and timely response to oil spills or hazardous materials releases to collect information, samples, and evidence that are time dependent and critical to support natural resource damage assessments throughout the coastal US. RRCs work on multi-disciplinary scientific, economic, and legal teams and are responsible for determining and quantifying injuries to NOAA trust natural resources through determination of injuries and pathway, and demonstration of causal mechanisms. The goal of the RRCs efforts is to determine, often through the Damage Assessment, Remediation, and Restoration Program, the appropriate amount and type of restoration required to restore injured NOAA trust resources and compensate the public for their lost use. Massachusetts' SSC and RRC are based in Boston. To date, DARRP has recovered over \$73M for restoration of natural resources injured by 15 oil spills and hazardous waste sites in Massachusetts.

New Bedford

NOAA Office of Education - [Environmental Literacy Program](#)

NOAA's Environmental Literacy Program (ELP), administered by the Office of Education, provides grants and in-kind support to advance NOAA's mission through formal (K-12) and informal education. In Massachusetts, ELP supports the Buttonwood Park Zoological Society (Bristol), which has a permanent exhibit featuring NOAA's Science On a Sphere (SOS) and is a member of NOAA's SOS Users Collaborative Network (SOS Network). The SOS Network connects over 150 science education institutions worldwide to the latest NOAA data as part of a focused effort to increase environmental literacy at all ages.

National Marine Fisheries Service (NMFS) - [Port Agent Field Office](#)

The Greater Atlantic Region's Port Agent Team works directly with the fishing industries of the region to provide in-person advice and support to fishermen and seafood dealers. Port agents also serve as a conduit for industry to relay information to the Regional Administrator and other NOAA staff about fishing industry concerns, thoughts and activities. Team members assist seafood dealers and vessel operators and owners with data reporting requirements, in navigating the permitting process, and with other Agency regulations and processes. They collect biological samples of seafood landed by commercial fishermen for use in fisheries stock assessments. They also provide the general public with information on fisheries and the marine environment by attending public events and through ad-hoc interactions.

National Marine Fisheries Service (NMFS) - [Restoration Center](#)

NMFS Restoration Center assists the New Bedford Harbor Trustee Council to implement restoration projects that address the injury to natural resources caused by the release of hazardous substances into New Bedford Harbor and the Acushnet River. The Council administers a fund derived from settlements with manufacturers that discharged polychlorinated biphenyls into the harbor and river. To date the Council has completed over 21 restoration projects including restoration of salt marsh, fish passage, eelgrass and shellfish, land protection, and recreational park construction. Additionally, NOAA's Damage Assessment, Remediation, and Restoration Program acts as a trustee for natural resources on behalf of the public. The Damage Assessment, Remediation, and Restoration Program collaborates with federal, state, and tribal entities and also works with cleanup agencies (such as the Environmental Protection Agency), local organizations, the public, and those responsible for the incident to protect coastal and marine natural resources; respond to discharges of oil and hazardous substances; assess risks and injuries to natural resources; and restore injured natural resources and related socioeconomic benefits.

Office of Oceanic and Atmospheric Research (OAR) - [Science On a Sphere® at Ocean Explorium](#)

Science On a Sphere® (SOS) is a room-sized global display system that uses computers and video projectors to display planetary data onto a six-foot diameter sphere, analogous to a giant animated globe. Researchers at NOAA developed Science On a Sphere® as an educational tool to help illustrate Earth System science to people of all ages. Animated images of atmospheric storms, climate change, and ocean temperature can be shown on the sphere, which is used to explain complex environmental processes in a way that is simultaneously intuitive and captivating.

Martha's Vineyard

Office of Oceanic and Atmospheric Research (OAR) - [Tall Tower Carbon Measurements](#)

NOAA's Earth System Research Laboratory Global Monitoring Laboratory (ESRL/GML) operates trace gas monitoring sites at tall television transmitter towers, and other towers, in five states, including Massachusetts. The sites were established to extend ESRL/GML's monitoring network into the interior of North America in order to provide data to aid estimation of the net carbon balance of the continent. Variations of trace gases, especially carbon dioxide, are largest near the ground, so we utilize existing tall towers as platforms for in situ and flask sampling for atmospheric trace gases.

Office of Oceanic and Atmospheric Research (OAR) - [Cooperative Global Air Sampling Network](#)

NOAA's Earth System Research Laboratory Global Monitoring Laboratory (ESRL/GML) operates a Cooperative Global Air Sampling Network to measure the distribution and trends of carbon dioxide (CO₂) and methane (CH₄), the two gases most responsible for human-caused climate change, as well as other greenhouse gases and volatile organic compounds. Samples are collected weekly at fixed locations and on several commercial ships. The air samples are delivered to ESRL/GML, located in Boulder, CO. The observed geographical patterns and small but persistent spatial gradients are used to better understand the processes, both natural and human induced, that underlie the trends. These measurements help determine the magnitude of carbon sources and sinks in North America.

[Waquoit](#)

National Ocean Service (NOS) - [Waquoit Bay National Estuarine Research Reserve](#)

The 2,780 acre Waquoit Bay Research Reserve, designated in 1988 and managed by the Massachusetts Department of Conservation and Recreation, studies the Cape Cod area in order to improve the understanding of coastal ecosystems and human influences on them, then translating that information to promote more informed decision making regarding coastal resources. Topics range from blue carbon and groundwater dynamics to green home practices, climate change, and ecological gardening techniques. Reserve staff work with local schools and help teachers implement classroom curricula on coastal topics.

National Ocean Service (NOS) – [Margaret A. Davidson Graduate Fellowship](#)

The Margaret A. Davidson Graduate Fellowship program funds graduate student research and professional development opportunities within the National Estuarine Research Reserve System. The program supports collaborative research addressing local management challenges that may influence future policy and management strategies. The Davidson Fellow at the Waquoit Bay National Estuarine Research Reserve will focus their research on forecasting rates of sediment nutrient and metal fluxes under coastal acidification for improved estuarine water quality.

[Woods Hole](#)

National Marine Fisheries Service (NMFS) - [Woods Hole Laboratory](#)

The Northeast Science Center focuses on collection, analysis, and presentation of scientific information about the Northeast Shelf ecosystem, its condition, and its marine life. In addition to its five laboratories, the Center uses four research vessels to support its work. They are the NOAA ship *Henry B. Bigelow*, and the small research vessels *Gloria Michelle*, *Victor Loosanoff*, and *Nauvoo*. The Greater Atlantic Regional Office and the Science Center are responsible for the District of Columbia and the following states: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and North Carolina; and the inland states of Vermont, Minnesota, Michigan, Wisconsin, Illinois, Indiana, Ohio, and West Virginia. NOAA's Northeast Fisheries Science Center's Woods Hole Laboratory is the nation's original federal marine fisheries laboratory. Research emphasis is on the natural and life history of the region's important seafood species, federally protected marine species, science supporting ecosystem-based resource management, and the sociological and economic condition of the fishing business. It also houses the Woods Hole Science Aquarium, the nation's oldest public display aquarium.

Office of Oceanic and Atmospheric Research (OAR) - [Cooperative Institute for the North Atlantic Region](#)

The Cooperative Institute for the North Atlantic Region (CINAR) was established at Woods Hole Oceanographic Institution (WHOI). CINAR serves as a mechanism to promote collaborative research between university scientists and those in NOAA. The mission of CINAR is to conduct and coordinate innovative and multidisciplinary research, engaging NOAA and academic scientists to enable informed decisions for sustainable and beneficial management of the U.S. Northeast

continental shelf ecosystem. Consortium members include Rutgers University, University of Maryland Center for Environmental Science, University of Maine, the Gulf of Maine Research Institute, University of Maryland Eastern Shore, University of Massachusetts-Dartmouth, and University of Rhode Island. CINAR conducts research across five themes: (1) sustained ocean observations and climate research; (2) ecosystem research, observation, and modeling; (3) stock assessment research; (4) protected species research and recovery; and (5) ecosystem based fisheries management.

NOAA Commissioned Officer Corps (NOAA Corps) and Office of Marine and Aviation Operations (OMAO) - [NEFSC Administrative and Operational Support](#)

The NOAA Commissioned Officer Corps stations multiple officers alongside OMAO civilian employees with the Northeast Fisheries Science Center (NEFSC) in support of fisheries operations in the North and Mid-Atlantic. These individuals fill various roles, including the Chief of Staff for NEFSC, OIC and JOIC of the *Gloria Michelle*, and as facility management personnel. In these roles, NOAA Corps officers and OMAO civilians provide necessary functions, such as planning and managing budgets, directing both shoreside and underway logistics for all sizes of NOAA vessels, and liaising with local, State and Federal agencies to coordinate operations throughout the region.

National Ocean Service (NOS) - Students for [Zero Waste Week](#)

Students are inviting their local communities to "Go Green and Think Blue" by joining them in the annual *Students for Zero Waste Week campaign*. During this campaign led by the Office of National Marine Sanctuaries, students focus on reducing land-based waste in order to protect the health of local marine environments. These young leaders are raising awareness of how single-use plastic and other types of litter affect the health of local watersheds, national marine sanctuaries, and the ocean. In addition, some schools are looking at ways to reduce their energy use on campus with hopes of raising awareness of how the burning of fossil fuels also impacts the health of the ocean.

[Coastal](#)

National Marine Fisheries Service (NMFS) - [Deep-Sea Coral Research and Technology Program](#)

NOAA's Deep Sea Coral Research and Technology Program is the only federal program dedicated to mapping, characterizing, and understanding deep-sea coral ecosystems, and sharing the information needed to conserve these habitats. The Program -- called for in the reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act and within the Office of Habitat Conservation -- is working with other NOAA offices and external partners to conduct fieldwork to study the distribution, abundance, and diversity of deep sea corals and sponges. Since 2009, more than 42,500 square miles of seafloor have been mapped and surveyed for deep-sea coral habitats from Florida to Maine, in Alaska and the West Coast, and in Hawaii and the Marianas Trench.

National Marine Fisheries Service (NMFS) - [Cooperation with States Program](#) and [Species Recovery Grants](#)

Under the authority of section 6 of the Endangered Species Act, the Cooperation with States Program brings states, NMFS, and other partners together to recover threatened and endangered species. A total of 25 U.S. territories and coastal states, including Massachusetts, currently participate in this program. Competitive grants are awarded to states through the Species Recovery Grants to States Program to support management, monitoring, research and outreach efforts for species that spend all or a portion of their life cycle in state waters. The funded work is designed to prevent extinctions or reverse the decline of species, and restore ecosystems and their related socioeconomic benefits. The Massachusetts Division of Marine Fisheries has received multiple awards through this program, including grants to support projects focused on North Atlantic right whales and sea turtles.

National Marine Fisheries Service (NMFS) - [Sea Turtle Salvage and Stranding Network](#)

The Sea Turtle Stranding and Salvage Network (STSSN) was formally established in 1980 to collect information on and document strandings of marine turtles along the U.S. Gulf of Mexico and Atlantic coasts. The network, which includes federal, state and private partners, encompasses the coastal areas of the eighteen-state region from Maine to Texas, and includes portions of the U.S. Caribbean. Data gathered by the Network helps inform bycatch reduction efforts, monitor factors affecting turtle health, and provide other information needed for sea turtle management and population recovery.

National Marine Fisheries Service (NMFS) - [National Marine Mammal Stranding Network](#) and [John H. Prescott Marine Mammal Rescue Assistance Grant Program](#)

The National Marine Mammal Stranding Network and its trained professionals respond to dead or live marine mammals in distress that are stranded, entangled, out of habitat or otherwise in peril. Our long-standing partnership with the Network provides valuable environmental intelligence, helping NOAA establish links among the health of marine mammals, coastal ecosystems, and coastal communities as well as develop effective conservation programs for marine mammal populations in the wild. There are five stranding network members in the state. NOAA Fisheries funds eligible members of the Stranding Network through the competitive John H. Prescott Marine Mammal Rescue Assistance Grant Program. [For fiscal year 2020, 43 competitive Prescott Grants were awarded for a total of \\$3.7 million nationwide](#), with three awards totalling \$273,830 going to two recipients in Massachusetts: the International Fund for Animal Welfare and the National Marine Life Center, Inc.

National Ocean Service (NOS) - [National Water Level Observation Network](#)

The National Ocean Service (NOS) operates ten long-term, continuously operating tide stations in the state of Massachusetts that provide data and information on tidal datum and relative sea level trends, and are capable of producing real-time data for storm surge warning. These stations are located at Boston Nantucket and Woods Hole. These stations also include meteorological sensors. Each station is associated with a set of tidal benchmarks installed in the ground that is used to reference the height of the water levels to help connect the water level to land.

National Ocean Service (NOS) - [Cape Cod PORTS®](#)

A Physical Oceanographic Real-Time System (PORTS®) is operated cooperatively with the local maritime community near Cape Cod. Real-time data are quality-controlled and disseminated to local users for safe and efficient navigation and include wave observations in Buzzards Bay and tidal current observations at the West End of the Cape Cod Canal.

National Ocean Service (NOS) - [Navigation Manager](#)

NOAA's navigation managers work directly with pilots, port authorities, and recreational boating organizations in Massachusetts. They help identify the navigational challenges facing marine transportation in Massachusetts and provide NOAA's resources and services that promote safe and efficient navigation. Navigation managers are on call to provide expertise and NOAA navigation response coordination in case of severe coastal weather events or other marine emergencies. The Office of Coast Survey has a navigation manager in Narragansett, RI to support mariners and stakeholders in the Northeast region.

National Ocean Service (NOS) - [Navigation Response Team](#)

The Office of Coast Survey (OCS) maintains the nation's nautical charts and publications for U.S. coasts and the Great Lakes. OCS navigation managers are strategically located in U.S. coastal areas to provide regional support to federal and state agencies in order to assist with navigational challenges. The Office of Coast Survey's Navigation Response Branch (NRB) conducts routine and emergency hydrographic surveys; and working with the regional Navigation Managers, navigation response teams (NRT) work around-the-clock after storms to speed the reopening of ports and

waterways. During emergency response, the NRTs provide time-sensitive information to the U.S. Coast Guard or port officials, and transmit data to NOAA cartographers for updating the Coast Survey's suite of navigational charts. NRT-New London is homeported in New London, CT and is able to respond in the Northeast region within 24 to 48 hours.

National Ocean Service (NOS) - [Coastal and Estuarine Land Conservation Program](#)

The Coastal and Estuarine Land Conservation Program brings conservation partners together to protect coastal and estuarine lands considered important for their ecological, conservation, recreational, historical, or aesthetic values. Subject to availability of funding, the program provides state and local governments with matching funds to purchase coastal and estuarine lands or obtain conservation easements for important lands threatened by development. Since 2002, the program has protected more than 110,000 acres of coastal land nationally, including over 16,000 acres protected as in-kind matching contributions. Six projects were successfully completed in Massachusetts, and these lands are protected in perpetuity.

National Ocean Service (NOS) – [National Coastal Zone Management Program](#)

Through a unique federal-state partnership, NOAA's Office for Coastal Management works with the Massachusetts Executive Office of Environmental Affairs to implement the National Coastal Zone Management Program in Massachusetts. NOAA provides the state coastal management program with financial and technical assistance to further the goals of the Coastal Zone Management Act and ensure coastal waters and lands are used in a balanced way to support jobs, reduce use conflicts, and sustain natural resources.

National Ocean Service (NOS) – [Digital Coast](#)

The Digital Coast is a focused information resource developed to meet the unique needs of coastal communities. Developed and maintained by NOAA's Office for Coastal Management, content comes from hundreds of organizations, including federal, state, and local agencies, plus private sector and non-profit contributors. The Digital Coast website provides not only site-specific coastal data, but also related the tools, training, and information needed to make these data useful for coastal decision makers.

National Ocean Service (NOS) – [National Coastal Resilience Fund](#)

The National Coastal Resilience Fund is a partnership effort between NOAA and the National Fish and Wildlife Foundation (NFWF) to restore, increase, and strengthen natural infrastructure to protect coastal communities, while also enhancing habitat for fish and wildlife. In Massachusetts, the NCRF awarded one project in FY18 and three projects in FY19.

National Ocean Service (NOS) - [Stellwagen Bank National Marine Sanctuary](#)

Stellwagen Bank National Marine Sanctuary is an 842-square-mile open ocean site located at the mouth of Massachusetts Bay. Important as a fishing ground for over 400 years, the area has more recently gained fame by being designated as one of the world's top destinations for viewing whales, seabirds and other marine wildlife. In efforts to better understand and protect these marine animals, the sanctuary has become a leading force in research. State-of-the-art non-invasive digital synchronous motion, acoustic and video recording tags have been revealing underwater feeding behaviors of whales while passive acoustic monitoring arrays provide data on calling animal distribution and the effects of anthropogenic noise on their communication. Official sister sanctuary agreements with the Dominican Republic, French Antilles and Bermuda created the first distributed network of marine mammal sanctuaries to protect humpback whales at both ends of their migratory route and along their migratory corridor. The sanctuary also conducts an extensive seabird program, focused on using satellite telemetry, stable isotope and fecal analysis to identify habitat use and food habits of great shearwaters, an abundant summer resident. An active citizen science program assists in documenting seabird

populations year-round. Additional research studies focus on sand lance, a key forage fish species, and the impact of climate change on sand lance abundance and distribution. The on-going process of shipwreck documentation has resulted in the listing of seven shipwrecks at six sites on the National Register of Historic Places. Through education partnerships, sanctuary exhibits now reside in the New England Aquarium, Maritime Gloucester and several other sites in the sanctuary region. A robust volunteer and intern program engages the public, provides meaningful experiences for students through retirees, and has increased the sanctuary's capacity to achieve its mission. The administrative office for this sanctuary is in Scituate.

National Ocean Service (NOS) - [Atlantic Environmental Response Management Application](#)

Assessing important spatial information and designing successful restoration projects rely upon interpreting and mapping geographic information, including the location, duration, and impacts from oil spills, other hazardous materials, or debris released into the environment. Atlantic Environmental Response Management Application (ERMA®) is an online mapping tool that integrates both static and real-time data, such as Environmental Sensitivity Index maps, ship locations, weather, and ocean currents, in a centralized, easy-to-use format for environmental responders and decision makers. ERMA staff continued to work closely with Federal and State agencies for drills, hurricane response, and incidents. Maintained habitat data for sensitive species. Ensured data was kept up-to-date and data collection methods were kept consistent.

National Ocean Service (NOS) - [Marine Debris Projects and Partnerships](#)

The NOAA Marine Debris Program (MDP) leads national and international efforts to research, prevent, and reduce the impacts of marine debris. The program supports marine debris removal, education and outreach, and research projects in partnership with state and local agencies, tribes, non-governmental organizations, academia, and industry. The MDP Northeast Regional Coordinator, based in Gloucester, supports coordination efforts with regional stakeholders, provides support to grant-funded projects, tracks progress of projects, and conducts regional marine debris outreach to local audiences. The MDP is partnering with Salem Sound Coastwatch, in coordination with Girls Inc. and Salem Public Schools, to recruit and work with groups of high school interns in Salem and Lynn, Massachusetts to execute service projects that focus on the marine debris problem and the community's reliance on single-use plastics. Through the CoastSmart Restaurant Campaign, students will encourage local restaurants to offer more sustainable products, while other students will produce a composting 101 video with restaurant owners and create a Plastic Reduction Advertisement Campaign focused on commuters. The Gulf of Maine Marine Debris Action Plan, covering Maine, New Hampshire, Massachusetts, and partners across the Canadian border, was published in 2019 with the help of more than 30 different organizations. The plan establishes a comprehensive framework for strategic action to ensure the Gulf of Maine and its coasts, people, and wildlife are free from the impacts of marine debris.

National Ocean Service (NOS) - [U.S. Integrated Ocean Observing System \(Northeastern Regional Association of Coastal Ocean Observing Systems\)](#)

The U.S. Integrated Ocean Observing System, or IOOS®, is a federally and regionally coordinated observing system with 17 interagency and 11 regional partners. The System addresses regional and national needs for coastal, ocean, and Great Lakes data and information. This includes gathering and disseminating regional observations; data management; modeling and analysis; education and outreach; and research and development. The Northeastern Regional Association of Coastal Ocean Observing Systems (NERACOOS) is one of the 11 Regional Associations. NERACOOS was established to network and expand the existing observing and prediction capacities of a multitude of institutions and agencies throughout New England and Maritime Canada. NERACOOS supports infrastructure that provides over-water meteorological and wave observations critical to safe navigation to the National Weather Service in Long Island Sound and the Gulf of Maine.. These platforms also support current and dissolved oxygen sensors that provide critical information for management of hypoxia and harmful algal bloom. Fisheries managers, water quality specialists, the Coast

Guard, and many others benefit from accurate and timely ocean observing infrastructure and related decision support tools. The region includes the coastal waters of Maine, New Hampshire, Massachusetts, Rhode Island, and Connecticut. There is overlap with the Mid-Atlantic Regional Association Coastal Ocean Observing System (MARACOOS), which also includes the coastal waters of Connecticut and Rhode Island. In addition, partners from the Canadian provinces of New Brunswick and Nova Scotia will be involved to ensure appropriate coverage in shared waters.

National Weather Service (NWS) - [Buoys](#)

The National Weather Service (NWS), through its National Data Buoy Center (NDBC), develops, deploys, operates, and maintains the current national data buoy network of moored and drifting weather buoys and land stations that serve all of the Nation's coastal states and territories. Within this network, 110 of the buoys and 51 of the land stations are maintained directly by NDBC. Located at NASA's Stennis Space Center in Mississippi, supports weather and marine warning and forecast services in real time by providing deep ocean and coastal meteorological and oceanographic observations. These data provide valuable information used by NWS supercomputers to produce computer-generated model forecasts of the atmosphere and climate. NDBC manages the Volunteer Observing Ship program to acquire additional meteorological and oceanographic observations supporting NWS mission requirements. NDBC also supports operational and research programs of NOAA and other national and international organizations.

[Statewide](#)

National Marine Fisheries Service (NMFS) - [New England Bay Watershed Education and Training Program](#)

The NOAA Bay Watershed Education and Training (B-WET) program is an environmental education program that promotes locally relevant, experiential learning in the K-12 environment. The primary delivery of B-WET is through competitive funding that promotes Meaningful Watershed Educational Experiences (MWEEs). The New England B-WET program recognizes that knowledge and commitment built from firsthand experience, especially in the context of one's community and culture, is essential for achieving environmental stewardship. New England B-WET responds to regional education and environmental priorities through local implementation of competitive grant funds.

National Marine Fisheries Service (NMFS) - [Greater Atlantic Regional Fisheries Office](#) and [Northeast Fisheries Science Center](#)

NMFS is responsible for the management, conservation and protection of living marine resources within the United States' Exclusive Economic Zone (water three to 200 mile offshore). Using the tools provided by the *Magnuson-Stevens Act*, NMFS assesses and predicts the status of fish stocks, develops and ensures compliance with fisheries regulations, restores and protects habitat and works to reduce wasteful fishing practices, and promotes sustainable fisheries. Under the *Marine Mammal Protection Act* and the *Endangered Species Act*, NMFS recovers protected marine species (e.g. whales, turtles). The Greater Atlantic Regional Fisheries Office (located in Gloucester, MA) includes divisions that promote sustainable fisheries, habitat conservation, and recovery of protected species, and conducts statistical analysis and programs supporting these divisions. Key fish species managed in the Greater Atlantic Region include the northeast "multispecies complex" (cod, haddock, yellowtail flounder etc.), Atlantic sea scallops, herring, lobster, and summer flounder. Key marine endangered species in this region are North Atlantic right whales, leatherback, loggerhead, and Kemp's ridley sea turtles, Atlantic salmon and Atlantic and shortnose sturgeon. NMFS is the lead agency coordinating the Large Whale and Sea Turtle Disentanglement Program activities and the Marine Mammal Health and Stranding Response Program activities. The core functions of these programs include coordinating volunteer networks to: respond to entanglements and strandings, investigate mortality events, and conduct biomonitoring, tissue/serum banking, and

analytical quality assurance. The Office also fosters sustainable [aquaculture](#) in the region, with two Regional Aquaculture Coordinators that act as a liaison between federal and state agencies to assist in permitting and coordination activities, supporting aquaculture outreach and education, and collaborating with industry, academia and other stakeholders on regional marine aquaculture issues.

The Northeast Fisheries Science Center (headquartered in Woods Hole, MA) focuses on collection, analysis, and presentation of scientific information about the Northeast Shelf ecosystem, its condition, and its marine life. In addition to its five laboratories, the Center uses four research vessels to support its work. They are: the NOAA ships *Henry B. Bigelow*, and the small research vessels *Gloria Michelle*, *Victor Loosanoff*, and *Nauvoo*. The Greater Atlantic Regional Fisheries Office and the Science Center are responsible for the District of Columbia and the following states: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and North Carolina; and the inland states of Vermont, Minnesota, Michigan, Wisconsin, Illinois, Indiana, Ohio, and West Virginia.

National Marine Fisheries Service (NMFS) - [Restoration Center](#)

The NOAA Restoration Center, within the Office of Habitat Conservation, works with private and public partners locally and nationwide to increase fisheries productivity by restoring coastal habitat. Projects support sustainable fisheries, help recover threatened and endangered species, and reverse damage from disasters like oil spills, ship groundings, and severe storms. Through Community-based Restoration Program projects, more than 1400 acres of fisheries habitat have been restored, rehabilitated, and protected and over 300 miles of streams have been opened to migratory fish since 2000. The local community supported these restoration efforts through the time and effort of over 1,000 volunteers. NOAA's Restoration Center works with private and public partners in the Commonwealth of Massachusetts to construct fish ladders at dams, remove dams, widen bridges, modify culverts to improve tidal flushing in coastal wetlands, and restore submerged aquatic vegetation. We provide technical and financial assistance to help recover threatened and endangered species, support sustainably managed species, and reverse damage down by oil spills and toxic releases. We provide technical and financial assistance to help recover threatened and endangered species, support sustainably Most of these projects focus on restoring fish passage for anadromous river herring as well as projects designed to restore coastal wetlands.

National Marine Fisheries Service (NMFS) - [Office of Law Enforcement](#)

NOAA's Office of Law Enforcement is the only conservation enforcement program (Federal or State) that is exclusively dedicated to Federal fisheries and marine resource enforcement. Its mission is to protect global marine resources by enforcing domestic laws and international treaties and obligations dedicated to protecting wildlife and their natural habitat. Our special agents and enforcement officers ensure compliance with these laws and take enforcement action if there are violations. Additionally, the Cooperative Enforcement Program allows NOAA the ability to leverage the resources and assistance of 27 coastal states and U.S. territorial marine conservation law enforcement agencies in direct support of the Federal enforcement mission. Effective fisheries law enforcement is critical to creating a level playing field for U.S. fishermen and enabling sustainable fisheries to support vibrant coastal communities. The Office of Law Enforcement's Northeast Division is headquartered in Gloucester, MA., with field offices in New Bedford, Falmouth and Scituate.

National Ocean Service (NOS) - [Office for Coastal Management](#)

The NOAA Office for Coastal Management practices a partner-based, boots-on-the ground regional approach to coastal management, with staff available in the eight regions. Assistance is provided to local, state, and regional coastal resource management efforts. Constituent feedback and assessments are an important part of the effort. New England staff are located in Durham, New Hampshire, Gloucester and Scituate, Massachusetts and Yarmouth, Maine. These employees

represent NOAA on several regional ocean governance initiatives (e.g., Northeast Regional Ocean Council, Gulf of Maine Council, Northeast Regional Planning Body), coordinate NOAA involvement in ocean observing system activities, and support research reserves, coastal zone management, and other NOAA and state coordinated activities.

National Ocean Service (NOS) - [Northeast Regional Ocean Council](#)

To maintain quality constituent service, the NOAA Office for Coastal Management staff in this region work with the Northeast Regional Ocean Council and the coastal states on this board by representing NOAA and serving in leadership roles in three priority areas: ocean planning, coastal hazards resilience and ocean and coastal ecosystem health. These staff also coordinate the deployment of NOAA products and services in this region.

National Ocean Service (NOS) – [Regional Geodetic Advisor](#)

The Regional Geodetic Advisor is a National Ocean Service (NOS) employee that resides in a region and serves as a liaison between the National Geodetic Survey (NGS) and its public, academic and private sector constituents within their assigned region. NGS has a Regional Geodetic Advisor stationed in Barre, Vermont serving the Northeast region including Massachusetts. The Geodetic Advisor provides training, guidance and assistance to constituents managing geospatial activities that are tied to the National Spatial Reference System (NSRS), the framework and coordinate system for all positioning activities in the Nation. The Geodetic Advisor serves as a subject matter expert in geodesy and regional geodetic issues, collaborating internally across NOS and NOAA to ensure that all regional geospatial activities are properly referenced to the NSRS.

National Weather Service - [NEXRAD \(WSR-88D\) Systems](#)

NEXRAD is used to warn the people of the United States about dangerous weather and its location. This radar technology allows meteorologists to warn the public to take shelter with more notice than ever before. The NEXRAD network provides significant improvements in severe weather and flash flood warnings, air traffic safety, flow control for air traffic, resource protection at military bases, and management of water, agriculture, forest, and snow removal. NEXRAD radar has a range of up to 250 nautical miles, and can provide information about wind speed and direction, as well as the location, size, and shape of precipitation. There are 159 operational NEXRAD radar systems deployed throughout the United States and overseas, of which one is in Massachusetts.

National Weather Service (NWS) - [Automated Surface Observing Systems Stations](#)

The Automated Surface Observing Systems (ASOS) program is a joint effort of the National Weather Service (NWS), the Federal Aviation Administration (FAA), and the Department of Defense (DOD). ASOS serves as the Nation's primary surface weather observing network. ASOS is designed to support weather forecast activities and aviation operations and, at the same time, support the needs of the meteorological, hydrological, and climatological research communities. ASOS works non-stop, updating observations every minute, 24 hours a day, every day of the year observing basic weather elements, such as cloud cover, precipitation, wind, sea level pressure, and conditions, such as rain, snow, freezing rain, thunderstorms, and fog. There are 19 ASOS stations in Massachusetts.

National Weather Service (NWS) - [Cooperative Observer Program Sites](#)

The National Weather Service (NWS) Cooperative Observer Program (COOP) is the Nation's weather and climate observing network of, by and for the people. More than 10,000 volunteers take observations on farms, in urban and suburban areas, National Parks, seashores, and mountaintops. The data are representative of where people live, work and play. The COOP was created to provide observational meteorological data required to define the climate of the United States and to help measure long-term climate changes, and to provide observational meteorological data in near real-time to support forecast, warning and other public service programs of the NWS. The data are also used by other federal, state

and local entities, as well as private companies. In some cases, the data are used to make billions of dollars' worth of decisions. For example, the energy sector uses COOP data to calculate the Heating and Cooling Degree Days which are used to determine individuals' energy bills monthly. There are 63 COOP sites in Massachusetts.

National Weather Service (NWS) - [NOAA Weather Radio All Hazards Transmitters](#)

NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service (NWS) forecast office. NWR broadcasts official NWS warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week. Working with the Federal Communication Commission's (FCC) Emergency Alert System, NWR is an "All Hazards" radio network, making it the single source for comprehensive weather and emergency information. In conjunction with federal, state, and local emergency managers and other public officials, NWR also broadcasts warning and post-event information for all types of hazards – including natural (such as earthquakes or avalanches), environmental (such as chemical releases or oil spills), and public safety (such as AMBER alerts or 911 Telephone outages). Known as the "Voice of NOAA's National Weather Service," NWR is provided as a public service by the NWS. NWR includes 1,100 transmitters covering all 50 states, adjacent coastal waters, Puerto Rico, the U.S. Virgin Islands, and the U.S. Pacific Territories. There are seven NWR transmitters in Massachusetts.

Office of Oceanic and Atmospheric Research (OAR) - [Massachusetts Institute of Technology Sea Grant College Program](#)

The National Sea Grant College Program (Sea Grant) is a federal-university partnership administered by NOAA that integrates research, extension outreach, and education. Sea Grant forms a national network of 34 programs in all U.S. coastal and Great Lakes states, Puerto Rico, and Guam. The Massachusetts Institute of Technology Sea Grant College Program sponsors marine research guided by local and national research needs. For maximal potential impact, research is focused on specific theme areas, including marine biotechnology, coastal management and utilization, technology development, non-indigenous species, and coupled ocean observation and modeling. Knowledge and creativity is applied to address relevant and timely issues in collaboration with researchers and academics from other Massachusetts universities and institutions. Early efforts to build inexpensive autonomous underwater vehicles (AUV) became a commercial success story, with innovative engineering then leading to the development of Robotuna, resulting in further improvements for AUV propulsion. The Marine Advisory Services focuses on water quality, invasive species, fisheries, and other issues vital to coastal communities as the climate changes. Education programs include hands-on training and mentoring of high school and college students to become the next generation of ocean science and engineering researchers. Community partners and advisory committees drawn from academic circles, non-government organizations, industry leaders, and state and local government, help establish priorities and shape the research program. Administrative offices are located in Cambridge.

Office of Oceanic and Atmospheric Research (OAR) - [Woods Hole Oceanographic Institution Sea Grant Program](#)

The National Sea Grant College Program (Sea Grant) is a federal-university partnership administered by NOAA that integrates research, extension outreach, and education. Sea Grant forms a national network of 34 programs in all U.S. coastal and Great Lakes states, Puerto Rico, and Guam. The Woods Hole Oceanographic Institution Sea Grant Program serves Massachusetts. Research targets healthy coastal ecosystems, sustainable fisheries and aquaculture, resilient communities and economies, and environmental literacy and workforce development. Projects in those themes include examining the effects of nitrogen loading on coastal ecosystems, developing an autonomous warning system for stranding of marine mammals, monitoring harmful algal blooms, and developing policy analysis and planning for community resilience. Extension and outreach activities include helping communities deal with coastal erosion and resilience planning, understanding disease processes in commercially important shellfish, working with communities on shellfish

resource management, managing marine debris, and providing teacher workshops for math and science teachers throughout New England. The administrative offices are in Woods Hole. Extension agents are located in Barnstable.

NOAA Office of Education - [Environmental Literacy Program](#)

NOAA's Environmental Literacy Program (ELP), administered by the Office of Education, provides grants and in-kind support to advance NOAA's mission through formal (K-12) and informal education. In Massachusetts, ELP supports the Blue Lobster Bowl in Massachusetts, one of 25 regional competitions of the National Ocean Sciences Bowl (NOSB). The NOSB is an academic competition that engages high school students in learning about ocean sciences and related STEM careers while helping them become knowledgeable citizens and environmental stewards. ELP supports the American Meteorological Society's DataStreme courses for K-12 educators through a grant and in-kind support. These courses use weather, climate, and the ocean as contexts for teaching science and improving understanding about the Earth system.

NOAA In Your State is managed by [NOAA's Office of Legislative and Intergovernmental Affairs](#) and maintained with information provided by NOAA's Line and Staff Offices. Questions about specific programs or offices should be directed to the NOAA Line or Staff Office listed.

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